



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/692,350	10/23/2003	Conor J. Cunningham	MSFT-2849/306818.1	8548
41505	7590	07/28/2005	EXAMINER	
WOODCOCK WASHBURN LLP			TRUONG, CAM Y T	
ONE LIBERTY PLACE - 46TH FLOOR			ART UNIT	PAPER NUMBER
PHILADELPHIA, PA 19103			2162	

DATE MAILED: 07/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/692,350

Applicant(s)

CUNNINGHAM ET AL.

Examiner

Cam Y T. Truong

Art Unit

2162

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) 15-24 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule.17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

1. Claims 1-24 are pending in this Office Action.

Election/Restrictions

2. Restriction to one of the following inventions is required under 35 U.S.C. 121:

Claims 1-14 are drawn to a data store objects, classified in class 707/103.

Claims 15-20 are drawn to a data structure, classified in class 707/100.

Claims 21-24 are drawn to encoding object with a type path, classified in class 709/230.

3. Inventions I, II and III are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant case, a data store objects in invention I can be used to manipulating objects. A data structure in invention II is used to includes files for storing a data type of object and object. Encoding object with a type path in invention III can be used to determining if its type path satisfy query. See MPEP § 806.05(d).

4. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

5. Applicant is reminded that upon the cancellation of claims to a non-elected

invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a petition under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

6. During a telephone conversation with Waldman, Jonathan M on 6/30/2005 a provisional election was made without traverse to prosecute the invention of group I, claims 1-14. Affirmation of this election must be made by applicant in replying to this Office action. Claims 15-24 withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 1-4 and 8-11 are rejected under 35 U.S.C. 102(e) as being anticipated by Gurevich (US 6499036).

As to claim 1, Gurevich teaches the claimed limitations:

“a data store comprising a plurality of objects” as the hierarchical arrangement

Art Unit: 2162

of the message nodes lists reflects the hierarchical arrangement of data container objects that DOM server software constructs at run-time. The above information shows that the system has included data store to store objects in DOM server (col. 22, lines 55-65; col. 31, lines 42-67),

“each object having an associated type” as a object has a object type (col. 30, lines 22-25; col. 33, lines 50-65; col. 34, lines 1-5) ,

“ each type having an identifier” as an identifier for a transaction type (col. 14, lines 35-40); and

“a hardware/software interface system for manipulating the plurality of objects” as objects 1900 and 1920 have a correspondence to the customer 1498 and account 1592 folder-type message nodes, respectively, discussed in relation to figs. 14&15. These programming objects are also utility programming objects that support the work of primary application programming objects in representing a business object (col. 31, lines 55-67).

As to claims 2 and 9, Gurevich teaches the claimed limitation “wherein each type is a user-defined type (UDT)” as user-defined type allows you to manipulate user-defined objects within a script (col. 26, lines 5-45).

As to claims 3 and 10, Gurevich teaches the claimed limitation “wherein a type can be a subtype of another type” as (figs. 14&15).

As to claims 4 and 11, Gurevich teaches the claimed limitation "wherein the data store further comprises a type path for each object" as (figs. 14&15).

As to claim 8, Gurevich teaches the claimed limitations

"a hardware/software interface system capable of manipulating a plurality of objects" as objects 1900 and 1920 have a correspondence to the customer 1498 and account 1592 folder-type message nodes, respectively, discussed in relation to figs. 14&15. These programming objects are also utility programming objects that support the work of primary application programming objects in representing a business object (col. 31, lines 55-67);

"each object having an associated type" as a object has a object type (col. 30, lines 22-25; col. 33, lines 50-65; col. 34, lines 1-5) ,

" each type having an identifier" as an identifier for a transaction type (col. 14, lines 35-40).

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. Claims 1-4 and 8-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Suver (US 6016497).

As to claim 1, Suver teaches the claimed limitations:

“a data store comprising a plurality of objects” as storing data items as objects in a database (col. 9, lines 15-45);

“each object having an associated type” as different types of data items indicate each item having an associated type (col. 9, lines 50-52);

“ each type having an identifier” as a column data type identifier and text type identifier (col. 9, lines 24-25; col. 10, lines 66-67);

“a hardware/software interface system for manipulating the plurality of objects” as a hardware/software interface system as shown in fig. 1 is used to execute data items that is stored in a database (col. 4, lines 5-15; col. 5, lines 62-67; col. 6, lines 20-50).

As to claims 2 and 9, Suver teaches the claimed limitation “wherein each type is a user-defined type (UDT)” as user defined types (col. 4, lines 6-10).

As to claims 3 and 10, Suver teaches the claimed limitation “wherein a type can be a subtype of another type” as (col. 20, lines 1-10).

As to claims 4 and 11, Suver teaches the claimed limitation “wherein the data store further comprises a type path for each object” as (col. 4, lines 6-20).

As to claim 8, Suver teaches the claimed limitations

“a hardware/software interface system capable of manipulating a plurality of

objects” as shown in fig. 1 is used to maintain data items that is stored in a database (fig. 14, col. 4, lines 5-15; col. 5, lines 62-67; col. 6, lines 20-50).

“each object having an associated type” as different types of data items indicate each item having an associated type (col. 9, lines 50-52);

“ each type having an identifier” as a column data type identifier and text type identifier (col. 9, lines 24-25; col. 10, lines 66-67).

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claims 5-7 and 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable Gurevich in view of Cheng (US 6366934).

As to claims 5 and 12, Gurevich discloses the claimed limitation subject matter in claim 1, except the claimed limitation “wherein the data store comprises a computed column for storing each type path”. Cheng teaches storing XML documents in existent or newly created columns of relational database table or in external files (col. 3, lines 60-65).

It would have been obvious to a person of an ordinary skill in the art at the time the invention was made to apply Cheng's teaching of storing XML documents in

existent or newly created columns of relational database to Gurevich in order to increasing the flexibility and power with which the data may be accessed, it also increases the complexity of the application, both from the perspective of the designer and the perspective of the user and to access data using the relatively simple OS file API.

As to claims 6 and 13, Gurevich discloses the claimed limitation subject matter in claim 1, except the claimed limitations " wherein each type path comprises a variable-length encoded value". Cheng teaches path varchar 256 (col. 12, lines 5-10). Cheng's teaching of path varchar 256 to Gurevich's system in order to provide an application for storing XML documents in existent or newly created columns of a relational database table or in external files.

As to claims 7 and 14, Gurevich discloses the claimed limitation subject matter in claim 1, except the claimed limitations" wherein each variable-length encoded value corresponds to a hierarchy level of the type of the associated object". Cheng teaches path varchar 256 (col. 12, lines 5-10).

It would have been obvious to a person of an ordinary skill in the art at the time the invention was made to apply Cheng's teaching of path varchar 256 to Gurevich's system in order to provide an application for storing XML documents in existent or newly created columns of a relational database table or in external files.

Art Unit: 2162

13. Claims 5-7 and 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable Suver in view of Cheng (US 6366934).

As to claims 5 and 12, Suver discloses the claimed limitation subject matter in claim 1, except the claimed limitation "wherein the data store comprises a computed column for storing each type path". Cheng teaches storing XML documents in existent or newly created columns of relational database table or in external files (col. 3, lines 60-65).

It would have been obvious to a person of an ordinary skill in the art at the time the invention was made to apply Cheng's teaching of storing XML documents in existent or newly created columns of relational database to Suver in order to increasing the flexibility and power with which the data may be accessed, it also increases the complexity of the application, both from the perspective of the designer and the perspective of the user and to access data using the relatively simple OS file API.

As to claims 6 and 13, Suver discloses the claimed limitation subject matter in claim 1, except the claimed limitations " wherein each type path comprises a variable-length encoded value". Cheng teaches path varchar 256 (col. 12, lines 5-10). Cheng's teaching of path varchar 256 to Surve's system in order to provide an application for storing XML documents in existent or newly created columns of a relational database table or in external files.

As to claims 7 and 14, Surve discloses the claimed limitation subject matter in

Art Unit: 2162

claim 1, except the claimed limitations" wherein each variable-length encoded value corresponds to a hierarchy level of the type of the associated object". Cheng teaches path varchar 256 corresponding level of the type of the object (col. 12, lines 5-10).

It would have been obvious to a person of an ordinary skill in the art at the time the invention was made to apply Cheng's teaching of path varchar 256 to Surve's system in order to provide an application for storing XML documents in existent or newly created columns of a relational database table or in external files.

Conclusion

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Srinivasan et al (US 6587856).

Contact Information

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cam Y T Truong whose telephone number is. (571) 272-4042. The examiner can normally be reached on Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Breene can be reached on (571) 272-4107. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Cam-Y Truong
Patent Examiner
Art Unit 2162
7/30/2005